2nd Grade Science Fair Ideas

Science Rocks!

Suggested Science Fair Project Ideas

Reporting Category 1 – Matter & Energy (2nd Grade)

Physical Properties: shape, relative mass, relative temperature, texture, flexibility, solids & liquids; Changes in Materials: caused by heating & cooling; Combining materials

- Does the size of an object help determine its mass?
- How does the flexibility of an object help in everyday situations?
- How does the texture of an object help in everyday situations?
- Can a solid change its shape?
- Does cold temperature affect solids and liquids the same way?
- How long does it take water to freeze?
- Does water expand or contract when it freezes?
- How long does it take an ice cube to melt?
- Does an ice cube melt faster at room temperature or in tap water?
- Does the shape of an ice cube affect how fast it will melt?
- What will melt faster, a solid ice cube or an ice cube crushed up?
- Which temperature of water will freeze the quickest: hot water, cold water, or tap water?
- Which temperature of water will reach room temperature the quickest, hot water or cold water?
- Does the color of a puddle of water affect the amount of time it takes to evaporate?
- Is slime a solid or a liquid?

Reporting Category 2 – Force, Motion, & Energy (2nd Grade)

Forms of Energy: light, sound, heat; Forces Cause Changes: pushing & pulling, magnets; Changes in Position of Object & Patterns of Movement of Objects

- Does sound travel better through solids or liquids?
- Do rubber bands of different widths produce different sounds?
- Does the color of a light bulb affect how the color of an object appears?
- Will a 1 centimeter bead of butter on a metal spoon melt faster in a cup of warm water or a cup of tap water?
- Do some colors create more heat energy than others?
- Does music help or distract classroom learning?
- What will a magnet attract (pick up)?
- How many paper clips will a magnet attract (pick up)?
- Does the temperature of a magnet (cold, warm, & room temperature) affect its strength?
- What happens to the strength of a magnet when it becomes rusty? Will it lose some of its strength, or will it be just as strong as when it was bright and shiny?
- Through how many sheets of paper will a magnet attract a paper clip?
- Which magnet (bar, horseshoe, disk, or ceramic) is the strongest?
- Which path (straight, zigzag, or round - all measured 3 meters long) will get you from point A to point B the fastest?
- Using a paper clip and a block eraser, which item takes more pushes to move from point A to point B?
- Which will spin longer on the floor, a cup or a ball?
- Will a plastic toy car or a metal toy car roll the farthest distance down a ramp?

Reporting Category 3 – Earth & Space (2nd Grade)

Rocks & soil: size, shape, color, texture, usefulness; Water: color, clarity, usefulness, freshwater vs. saltwater; Weather Patterns: temperature, wind conditions, & rainfall; Patterns & Characteristics of the 4 Seasons; Objects in the Sky: clouds, Moon, stars & Sun; Water Cycle

- How can rocks be sorted out? (rough & smooth, dull & shiny, large & small, colorful & not colorful, speckled & not speckled, heavy & light)
- Which freezes faster freshwater & saltwater?
- What will happen to a raw egg when placed in freshwater vs. saltwater?
- How many ways does your family use water? (create a chart)
- Observe and record day-to-day weather changes such as hot or cold, clear or cloudy, calm or windy, and rain or no rain for two weeks. What was the weather like during the two weeks? Was the weather the same each day? Were the clouds the same each day? How do clouds tell us about the weather? Can you predict the weather based on the type of clouds in the sky?
- How do weather conditions, the clothing you wear, and your outdoor activities change from season to season?
- Observe and record the shape of the Moon for 4 weeks. What patterns did you observe over time?
- What activities do you do during the daytime verses the nighttime?
- What stars can you see from your house? Can you see the same stars every night?
- Why do stars appear to move across the sky?
- Observe and record your shadow for 2 days at 8:00 am, 10:00 am, 12:00 pm, 2:00 pm, 4:00 pm, and 6:00 pm. How does the size and shape of your shadow change throughout the day?
- What is the difference between the Sun and the Moon?

Reporting Category 4 – Organisms & Environments (2nd Grade)

[NO LIVING ANIMALS, PLANTS, OR MOLD CULTURES ALLOWED FOR PRESENTATION]

Living & Nonliving Things, Basic Needs of plants & animals, External Physical Characteristics of Plants & Animals: color, size, body coverings, & leaf shapes; Food chains, Life Cycles: Insects

- ✓ What are living and nonliving things?
- ✓ (Observe and care for a small plant.) What do plants need to survive? What are the parts of a plant? How do they help it survive?
- ✓ (Observe and care for a family pet.) What do animals need to survive? What physical characteristics and behaviors help them meet their needs?
- ✓ In what type of weather conditions do bean seeds grow best? (a warm place-on the window sill or a cool place-inside the refrigerator)
- ✓ Do bean plants grow better in sunlight or in darkness?
- ✓ Do bean plants grow better with leaves or without leaves?
- ✓ Do bean plants grow better being watered once a week or three times a week?
- ✓ How does water travel through a plant? (use celery & food coloring)
- ✓ Why are a bird's feathers important?
- ✓ How do an animal's feet help it survive its environment? (claws, hooves, webbed feet, sticky pads, paws, etc.)
- ✓ How do different animal coverings (such as, fur – on a mammal, scales - on a reptile or fish, feathers – on a bird, wet skin-on an amphibian) help an animal survive?
- ✓ Why are your thumbs important? (Tape your child's thumb to the palm of his/her writing hand, and have them perform several tasks such as, picking up a paper clip, drawing a square, filling in a circle, paper clipping a set of papers, etc.)
- ✓ Compare the life cycle of a ladybug and a grasshopper (insects). How are they alike and how are they different?